451/68

Edwards

51-3

Cup Wheel Automatic Variety Grinder.

Am. Machinist 8/4/88

This machine is designed for grinding flat surfaces of moderate width, such as steel dies of great variety, keys, flats used in card grinding machinery, iron planes and any article with straight edge or flat face.

The grinding is done on a front edge or rim of the cup wheel which grinds the work flat and true. It has a three T slotted table 9 inches wide, on which chucks, angle irons and various arrangements can be placed, adapting it to do a large variety of work.

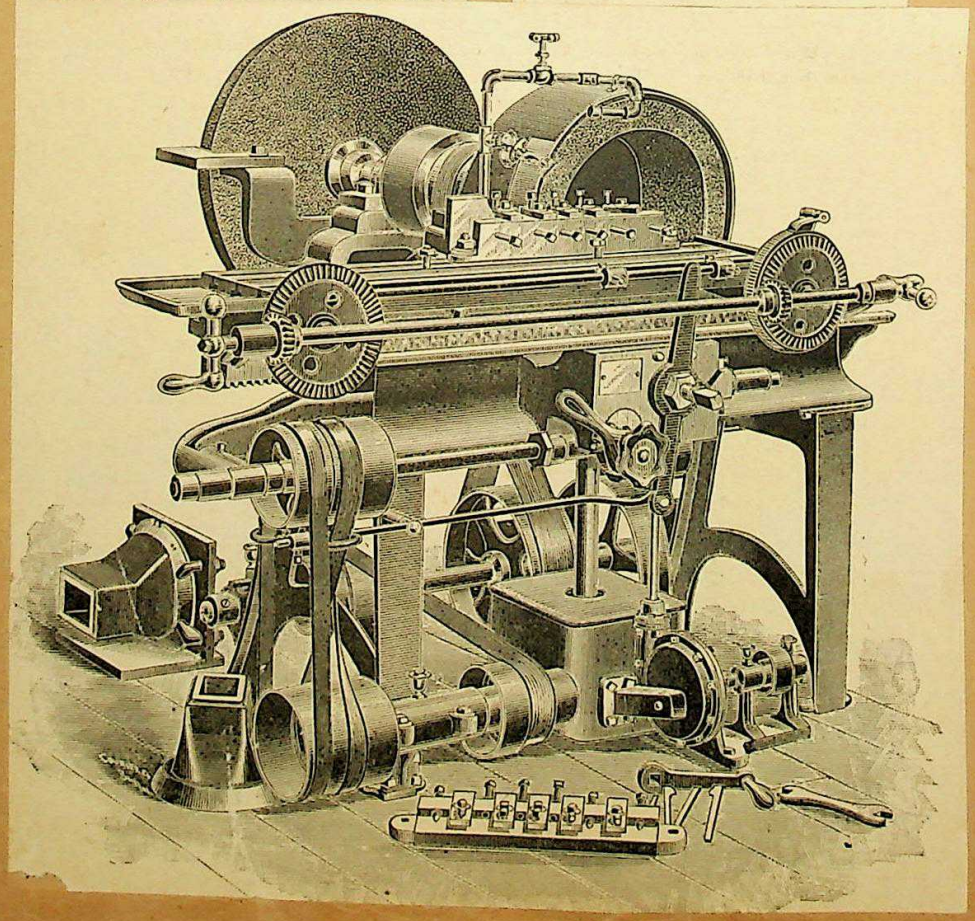
Both ends of the table are advanced or fed forward equally at the same time by means of bevel gears and connecting rod. The carriage runs on a dovetail track of good width, gibbed to take up wear, and can be instantly stopped by dropping the worm out of gear without shipping any belts or stopping the wheel, a convenience in putting on and taking off work. The worm and worm gear are run in an oil dish to prevent wear.

The machine has galvanized iron pans on the carriage under the table ; and one under the wheel that catches the water used and conducts it into a cast-iron tank located under the machine out of the way. A centrifugal pump is attached to one of these tanks, piped so that plenty of water is supplied to the wheel, with valve to regulate the amount of flow.

The pump furnishes a large supply of water, prevents heating and drawing the temper, and grinding can be done much faster than when run dry. Moreover it prevents loose emery flying on the working parts, and on the neighboring machinery.

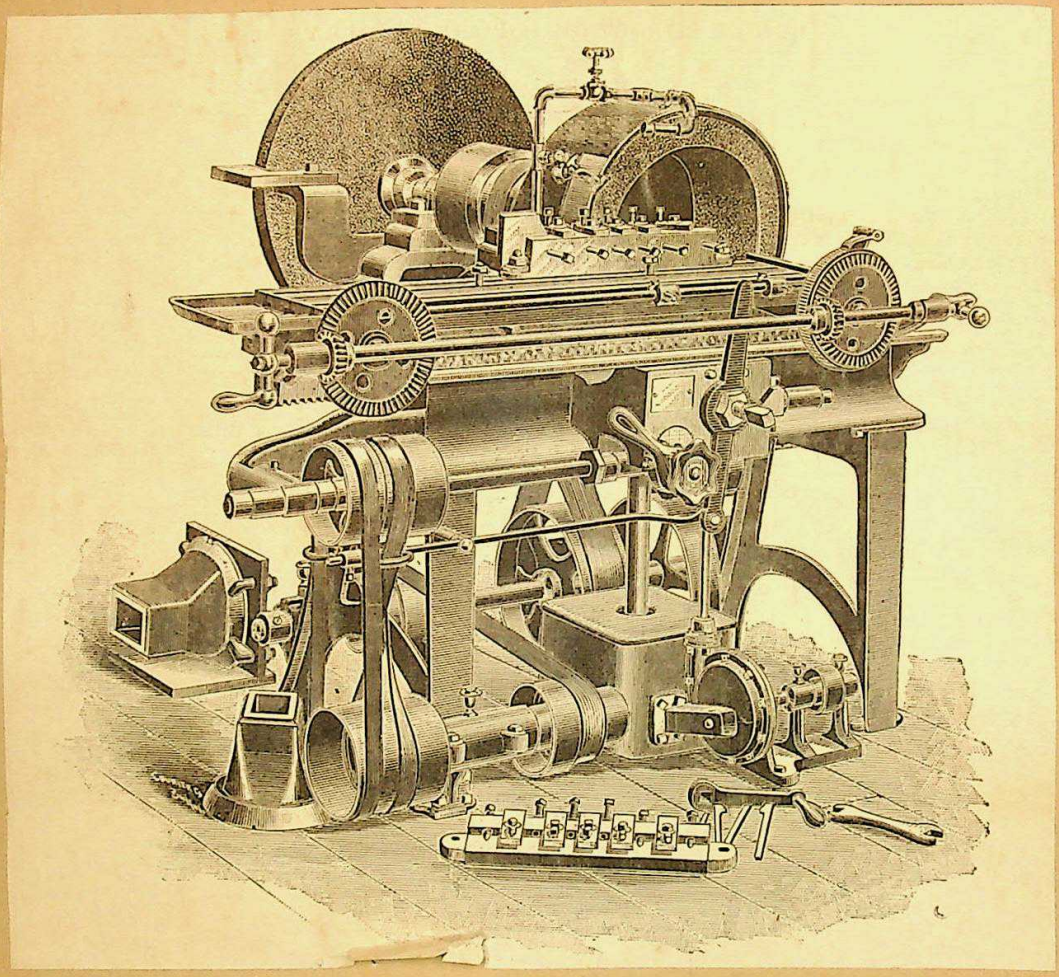
Seven sizes of these machines are made, and can be furnished to do work from one inch to twelve feet long. A large wheel can be used on the back end of the spindle for dry grinding of miscellaneous work. It has 1¼ inch steel spindle, bearings 8 inches long, with spindle pulley 8½ x 5 inches. The emery wheel is 16 inches diameter, 8½ inches deep outside measure with 2 inch rim, and is large for a cup wheel, being equal to one 26 inches diameter by 1½ inches thick of the common kind. The emery wheel rests on a carriage running over a back extension to the bed, and is fed forward on a dovetail track, as the wheel wears away, by means of a hand screw, from the back side of the machine.

An overhead countershaft goes with each machine, with driving pulley 16 inches diameter, 10 inch face (the extra width of face to make it so the emery wheel below can be fed forward as it wears away and belt carried along accordingly). The tight and loose pulleys are 10 x 5 inches, and should run 600 revolutions per minute. This machine is made by the Springfield Glue and Emery Wheel Company, Springfield, Mass.



Metal 51-3
Plane

51/3



Cup Wheel Automatic Variety Grinder.

Railroad Gazette 8/10/88—518

This machine is designed for grinding flat surfaces of moderate width, such as steel dies of great variety, keys, iron planes and any article with straight edge or flat face.

The grinding is done on a front edge or rim of the cup wheel, which grinds the work flat and true. It has a three T slotted table 9 in. wide, on which chucks, angle irons and various arrangements can be placed, adapting it to do a large variety of work.

Both ends of the table are advanced or fed forward equally at the same time by means of bevel gears and connecting rod. The carriage runs on a dovetail track of good width, gibbed to take up wear, and can be instantly stopped by dropping the worm out of gear without shipping any belts or stopping the wheel, a convenience in putting on and taking off work. The worm and worm gear are run in an oil dish to prevent wear.

The machine has galvanized pans on the carriage under the table and one under the wheel that catches the water used and conducts it into a cast-iron tank located under the machine out of the way. A centrifugal pump is attached to one of these tanks, piped so that plenty of water is supplied to the wheel, with a valve to regulate the amount of flow.

The pump furnishes a large supply of water, prevents heating and drawing the temper, and grinding can be done much faster than when run dry. Moreover, it prevents loose emery flying on the working parts and on the neighboring machinery.

Seven sizes of these machines are made, and can be furnished to do work from 1 in. to 12 ft. long. A large wheel, as shown in the illustration, can be used on the back end of the spindle for dry grinding of miscellaneous work. It has 1¾ in. steel spindle, bearings 8 in. long, with spindle pulley 8½ × 5 in. The emery wheel is 16 in. diameter, 8½ in. deep outside measure, with 2 in. rim, and is large for a cup wheel, being equal to one 26 in. diameter by 1½ in. thick of the common kind. The emery wheel rests on a carriage running over a back extension to the bed, and is fed forward on a dovetail track, as the wheel wears away, by means of a hand screw, from the back side of the machine.

This machine is made by the Springfield Glue & Emery Wheel Co., Springfield, Mass., from whom any further particulars can be obtained.